HW#7H: Real World Quadratics – Day 2

Honors Geometry

Due Date: Wednesday, Sept. 17th

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ TP: \_\_\_\_\_\_\_

**Failure to show work on all problems or use complete sentences will result in a LaSalle.**

***For problem numbers 1 and 2, you must GRASP them on a separate piece of graph paper. This piece of paper should have problem 1 on the front and problem 2 on the back. Use your classwork to help guide you through the process.***

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| 1) Starting at a height of 4 feet, a ball is thrown vertically upward with an initial velocity of 25 feet per second.  a. Write a function that demonstrates the height of the ball after *t* seconds: h(t) = -16t2 + \_\_\_t + \_\_\_  b. What is the height of the ball at 1.25 seconds?  c. When does the ball reach its maximum height?  d. What is the maximum height of the ball?  e. How long does it take the ball to reach the ground? | |
| 2) Maria throws a shot put with an initial velocity of 25 feet per second. She releases it at a height of 5 feet.  a. Write a function that demonstrates the height of the shot put after *t* seconds.  b. What is the height of the shot put at 1 second?  c. Find the time the shot put is in the air.  d. What is the maximum height of the shot put?  e. How long does it take the shot put to reach its maximum height? | |
| Mixed Review (Do not GRASP! Solve Mixed Review on this sheet.) | |
| 3) What is the sum of all values for x that satisfy the equation: | 4) Use quadratics formula to solve: |
| 5) What are the solutions to: | 6) Find the discriminant: |